

# Ethyl Glucuronide (EtG) Testing

**Ethyl Glucuronide (EtG)** is a direct metabolite of ethanol. EtG is formed by enzymatic conjugation of ethanol with glucuronic acid. EtG can be detected in various body fluids and hair.

## ***Benefits:***

Can indicate recent use (up to 80 hours for chronic users)

Stable and not heat sensitive

Not made via fermentation

## ***EtG Cutoff Level:***

1000 ng/mL cutoff—set to avoid any positive EtG results due to incidental exposure such as environmental ethanol sources or inadvertent ingestion.

## ***Incidental Exposure:***

Nyquil (very old formulation)

Mouthwashes

Non-alcoholic Beers

Hand Sanitizers

Tinctures or Communion Wine

Foods containing alcohol

## ***Scenarios***

Drinking a 12 ounce beer (3.2% ethanol) could cause a peak concentration of EtG of ~4,000 ng/mL at about 4 hours and remain above 100 ng/mL for up to 18 hours<sup>(1)</sup> Three beers may be detected up to 48 hours.

Drinking three 6 ounce glasses of wine can cause a peak concentration of EtG of ~68,400 ng/mL at about 5 hours and have no EtG at 40 hours<sup>(1)</sup>

Extreme use of hand sanitizers such as Purell over an 8 hour period can show an EtG reading greater than 700 ng/mL<sup>(2)</sup>

Excessive use of mouthwash over an 8 hour period has shown to have an EtG reading of greater than 300 ng/mL<sup>(3)</sup>

### ***Disadvantages:***

Interference from unknown biological substances

Dilution sensitive

False negatives due to bacterial infections from Urinary Tract Infections such as *E. Coli*

### ***Violations:***

For a positive EtG testing result, the offender will not receive a violation report/notice of citation report ***recommending revocation*** unless the offender admits alcohol use, or a confirmation test has been performed.

Offender will receive a violation report/notice of citation in accordance with P3-8 Violation Process, condition #8.